

Date: Thu, 6 May 93 13:12:01 PDT  
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>  
Errors-To: Info-Hams-Errors@UCSD.Edu  
Reply-To: Info-Hams@UCSD.Edu  
Precedence: Bulk  
Subject: Info-Hams Digest V93 #548  
To: Info-Hams

Info-Hams Digest                      Thu, 6 May 93                      Volume 93 : Issue 548

Today's Topics:

                ATV Repeater antennas  
                Confusing letters in call signs (2 msgs)  
                        Ham Scanners  
                        Need ATV receiver advice  
                        Need for foul language?  
                        no-code defense  
                        PVC tubing for mast?  
                        Spread Spectrum use?  
                TAKE THE NO-CODE CRAP TO ".policy"  
                Two-Line Orbital Element Set: Space Shuttle  
                WANTED: 30M VFO details for Explorer Rcvr (8/92 '73')  
                        Where Can I FTP SuperMorse From?  
                        Why is .info stuff here?

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>  
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

-----  
Date: 6 May 1993 15:51:04 GMT  
From: swrinde!gatech!howland.reston.ans.net!sol.ctr.columbia.edu!  
usenet.ucs.indiana.edu!master.cs.rose-hulman.edu!master.cs.rose-hulman.edu!  
news@network.UCSD.EDU  
Subject: ATV Repeater antennas  
To: info-hams@ucsd.edu

What kind of antennas are in use for ATV repeaters with horizontal  
polarization? Are there any commercial models available?

tnx es 73 de K9CUN, Jack

-----  
Date: 6 May 93 14:19:43 GMT  
From: topaz.bds.com!topaz.bds.com!ron@uunet.uu.net  
Subject: Confusing letters in call signs  
To: info-hams@ucsd.edu

That's what phonetics are for.

It's bad enough having a call W02L. Even when I read it phonetically people come back with W02L.

Though it was neat when it was first issued, I'd cause little mini-pileups amongst the prefix seekers.

-Ron

-----  
Date: 6 May 93 16:35:59 GMT  
From: pa.dec.com!decabo.abo.dec.com!e2big.mko.dec.com!.zko.dec.com!  
coolidge@decwrl.dec.com  
Subject: Confusing letters in call signs  
To: info-hams@ucsd.edu

--  
On/at Date: Tue, 4 May 1993 20:51:01 GMT  
In <1993May4.205101.4016@mks.com>,  
richw@mks.com (Rich Wales) of  
Mortice Kern Systems, Waterloo, Ontario, CANADA  
writes, in part:

> But I'm aware that certain letters, or groups of letters, can be con-  
> fusing over the air when using voice. For example, the suffix of my  
> US call (WA6SGA) has constantly been misunderstood as FGA, or even  
> FJA, no matter how carefully I enunciate it.

-----  
Date: 6 May 93 17:06:17 GMT  
From: news-mail-gateway@ucsd.edu  
Subject: Ham Scanners  
To: info-hams@ucsd.edu

>I need to do a project based on electromagnetic radiation for my physics  
>class, and, since I'm a HAM, I figured I'd make a HAM scanner. Does anyone

>know of any sources that describe how to build a HAM scanner, or for that  
>matter, any type of radio or such?

>-----

>Kelly Schwarzhoff kellys@holonet.net

Kelly, I've made a Ham scanner out of my Ramsey FX-146. The frequency is controlled by 16 lines and the range is 140 to 180 MHz. My June '92 73 magazine article, "8000 Channels for the FX-146", gives some ideas on how to do it. You can scan any number of the 8000 channels. An additional feature is if you hear someone during scanning that you would like to talk to, just pick up the mike and give them (I hate him/her/it) a shout, assuming, of course, they are Hams. If you're interested, send me your address and I'll send you a sketch of what I did...KG7BK

-----

Cecil\_A\_Moore@ccm.hf.intel.com

-----

Date: 6 May 93 02:25:45 GMT

From: gossip.pyramid.com!sword.eng.pyramid.com!andrem@decwrl.dec.com

Subject: Need ATV receiver advice

To: info-hams@ucsd.edu

As posted here a while ago, I'm working on getting an ATV setup working to get live video from cars on a racetrack. I've gotten a hold of a transmitter setup (made by PC Electronics, I think), which seems to work ok (well, it looks like we'll have to replace the final, but what the hell...) The transmitter is currently set for 434 Mhz.

Now that I've got that piece, I need to get a receiver to use with it. A member of the car club has monitors that he can make available, so I need a receiver that will receive at 434 Mhz and give an output the monitors can use (I'm not sure of the terminology here - what do you call the signal that is used by common VCRs and TVs through the phono/RCA style jacks? Baseband? Composite?)

I'm hoping to find a relatively inexpensive kit that will allow me to get this thing up and running. I don't have a lot of time before the event comes up, so I need to find a solution quickly. Suggestions of particular makers and model numbers would be appreciated. Price is definitely an issue here, so cheaper solutions would be preferred (as long as they work).

Also, can anyone recommend a good antenna to use on a car carrying the transmitter? I would like to come up with something that could be moved from car-to-car easily without drilling holes into the cars. Mag-mounts are definitely out of the question.

I have a related question for anyone familiar with ATV in the San Francisco

Bay area. I understand that 434.0 is the input freq for an ATV repeater on Diablo. Is there likely to be any problem with running a transmitter that puts out 10-15 watts on 434.0 at Laguna Seca? I assume that it's far enough away not to cause any interference, but would like to be sure.

```
+-----+
| Andre Molyneux   KA7WVW   "Insert your favorite disclaimer here" |
+-----+
|      -===== PYRAMID TECHNOLOGY CORP |Internet:      |
|      ----- 3860 N. First Street   | andrem@pyramid.com |
|      ----- San Jose, CA          |Packet:           |
|      ----- (408) 428-8229         | ka7wvv@n0ary.#nocal.ca.usa.na |
+-----+
```

-----  
Date: 6 May 93 16:36:54 GMT  
From: ogicse!uwm.edu!linac!att!att-out!cbnewsj!k2ph@network.UCSD.EDU  
Subject: Need for foul language?  
To: info-hams@ucsd.edu

In article <C6Jw0q.52@hpbmoea.sqf.hp.com>, dstock@hpbmoca.sqf.hp.com (David Stockton) writes:

>  
> Lady Astor: If you were my husband, I would poison your food.  
>  
> Churchill : And if you were my wife, madam, I would eat it !  
>

Then, of course, there is this half-witticism from the movie, "Arthur:"

Arthur: (to butler) I'll be taking a bath now.

Butler: I'll alert the media.

73,  
Bob K2PH  
--

-----  
Bob Schreibmaier K2PH | UUCP: ...!att!mtdcr!bob  
AT&T Bell Laboratories | Internet: bob@mtdcr.att.com  
Middletown, N.J. 07748 | ICBM: 40o21'N, 74o8'W  
-----

Date: Thu, 6 May 1993 03:29:56 EST  
From: anomaly.sbs.com!kd1nr!news@uunet.uu.net  
Subject: no-code defense

To: info-hams@ucsd.edu

jpotts@hpspdla.spd.HP.COM (John Potts) writes:

> Is this topic still around. For pro-code and no-code fans I have one  
> thing to say  
>  
> GET A LIFE !!!

Nah... get an account on a real computer and get a kill file. :)

Tony

```
-----  
Tony Pelliccio kd1nr/ae      "Usenet is like a herd of performing elephants  
*!*!*!*!*!*!*!*!*!*!*      with diarrhea -- massive, difficult to  
system@garlic.sbs.com       redirect, awe-inspiring, entertaining, and a  
-----                       source of mind-boggling amounts of excrement  
                               when you least expect it." --spaf (1992)
```

-----  
Date: 6 May 1993 17:25:58 GMT  
From: jgervais@ucsd.edu  
Subject: PVC tubing for mast?  
To: info-hams@ucsd.edu

>From: markm@bigfoot.sps.mot.com (Mark Monninger)

>Does anyone have any experience using PVC tubing for antenna support  
>masts? I'm thinking of putting up an inverted-vee and would like to get  
>the apex up 40 feet or higher. I have heard of people using PVC tubing  
>to construct masts but have never heard any details about it. Is  
>sched 40 rigid enough? What diameter would be required? How well  
>does it hold up?

>  
>I've also seen plans in the Handbooks for wood masts constructed from  
>2x4's or 2x3's. Anyone ever built one of these? I would think that 20+  
>ft timbers would be expensive and heavy. If it would work, it seems  
>that PVC would be light, cheap and easy to work with. They also might  
>be useful for Field Day.

>  
>Any comments or suggestions?

>  
>Thanks & 73... Mark AA7TA

I'm using a 25 ft. PVC mast for my vertical and it's quite  
stable (Sched. 40, 1.75" dia.). Much higher than that though,

and the thing goes to mush (my mast is in 5 ft. sections, so  
I add/delete as necessary).

I don't think the 2" dia. pipe would be good for 40+ feet,  
Unless of course you could support the bottom half against  
your house or a tree. Barring that, hunt for a larger diameter  
pipe, or plant something that grows fast....

Good luck!

Joe Gervais     jgervais@ucsd.edu  
KD6PRD ==> 13 WPM or Bust!

"So... if she... weighs the same as a	Mystery Science Theatre 3000	
duck... she's made of wood."	"It's not just cool, it's the	
"And therefore?"	only thing on TV Saturday	
"...a witch!!!"	afternoons."	

-----  
Date: 6 May 93 17:53:29 GMT  
From: news-mail-gateway@ucsd.edu  
Subject: Spread Spectrum use?  
To: info-hams@ucsd.edu

Here in the L.A. there will be a 900 mHz spread spectrum net work up and  
running in the very near future ( 3 to 4 weeks) . It will trans fer data at 3  
meg baud. The soft ware and hardwareare off the shelf. The hard ware is a card  
that plugs into your IBM or clone. IT contains all the hardware needed  
including the radio, all you have to supply is the antennia of choice.  
There will be a gateway to internet thru a local collage.  
Windows for work groups will be able to use the hardware. The cards will work  
with Novel IPX.  
Keep watching the net I will post a note and more information when the system  
is up and running.

73  
Don  
WB6LFC

-----  
Date: Wed, 5 May 1993 22:05:12 EST  
From: anomaly.sbs.com!kd1nr!news@uunet.uu.net  
Subject: TAKE THE NO-CODE CRAP TO ".policy"  
To: info-hams@ucsd.edu

randall@informix.com (Randall Rhea) writes:

> The whole point of creating rec.radio.amateur.policy was  
> to remove the no-code debate from the .misc group. Please  
> use the .policy group as it was intended. The rest  
> of us are sick and tired of debating a topic that was both  
> resolved and worn-out two years ago.  
>  
> 73 DE KK6MY

Just out of curiosity, ever hear of a kill file?

73, Tony

```
-----  
| Tony Pelliccio kd1nr/ae | "Usenet is like a herd of performing elephants  
|                          | with diarrhea -- massive, difficult to  
| system@garlic.sbs.com   | redirect, awe-inspiring, entertaining, and a  
|                          | source of mind-boggling amounts of excrement  
----- when you least expect it." --spaf (1992)
```

```
-----  
Date: Wed, 5 May 1993 16:04:13 MDT  
From: gummy!destroyer!cs.ubc.ca!unixg.ubc.ca!kakwa.ucs.ualberta.ca!alberta!adec23!  
ve6mgs!usenet@yale.arpa  
Subject: Two-Line Orbital Element Set: Space Shuttle  
To: info-hams@ucsd.edu
```

The most current orbital elements from the NORAD two-line element sets are carried on the Celestial BBS, (513) 427-0674, and are updated daily (when possible). Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current elements for the current shuttle mission are provided below. The Celestial BBS may be accessed 24 hours/day at 300, 1200, 2400, 4800, or 9600 bps using 8 data bits, 1 stop bit, no parity.

Element sets (also updated daily), shuttle elements, and some documentation and software are also available via anonymous ftp from archive.afit.af.mil (129.92.1.66) in the directory pub/space.

STS 55

```
1 22640U 93 27 A 93125.24999999 .00041435 00000-0 11400-3 0 240  
2 22640 28.4566 204.4193 0014724 329.9791 340.6464 15.92206044 1379
```

--

Dr TS Kelso  
tkelso@afit.af.mil

Assistant Professor of Space Operations  
Air Force Institute of Technology

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Date: 5 May 93 22:15:28 EDT  
From: pacbell.com!iggy.GW.Vitalink.COM!wetware!spunky.RedBrick.COM!psinntp!  
psinntp!arrl.org@decwrl.dec.com  
Subject: WANTED: 30M VFO details for Explorer Rcvr (8/92 '73')  
To: info-hams@ucsd.edu

In rec.radio.amateur.misc, gary@ke4zv.uucp (Gary Coffman) writes:  
>In article <1442@arrl.org> zlau@arrl.org (Zack Lau) writes:  
>>In rec.radio.amateur.misc, gary@ke4zv.uucp (Gary Coffman) writes:  
>>>  
>>>LC circuits scale nicely with frequency. To move from 40 to 30 meters,  
>>>scale the inductance and capacitance by  $\sqrt{30/40}$ .  
>>  
>>??  
>>  
>>I would try scaling the inductance and capacitance inversely proportional  
>>to frequency. For example, in going from 7MHz to 10 MHz, a 100 pF  
>>capacitor would be scaled to 70 pF, while the resonating inductor would  
>>scale from 5.17 uH to 3.62 uH. You usually scale all the inductors  
>>and capacitors, including the coupling/shunt elements.  
>>  
>>For casual use, this is probably close enough.  
>  
>Probably, but the formula is  $F=1/(2\pi\sqrt{LC})$  so scaling by the  
> $\sqrt{\text{of the frequency ratio}}$  gives a better approximation. In this  
>case, moving from 40 to 30 meters requires a 0.86 scale factor.

So, to double F you need to halve  $\sqrt{LC}$ , according to the  
formula.

Or, squaring both sides,  $F^2$  is proportional to  $1/LC$

Note that if you make  $1/L$  proportional to F and  $1/C$  proportional  
to F you get an \*exact\* scaling. Pretty convenient, IMO.

It seems that Gary has botched the math. Fortunately, I have  
lots of patience. :-).

>  
>>However, stuff like input and output impedances often vary  
>>with frequency unless feedback is used to control them. Thus,  
>>the networks may have to be changed to accommodate the new impedances.  
>  
>If you move both reactances equally, the impedance of the network  
>should remain the same at the new frequency as the unscaled network's  
>impedance at the old frequency. If you only scale one of the reactances,  
>the network impedance will change with the frequency shift.



Sorry about that, I was writing about the impedances of the devices being matched by the network, and not the network itself. This is the great thing about MMIC or monolithic microwave integrated circuits with 50 ohm input and output impedances. Your typical active mixer chip isn't as well behaved.

I must say that associating terms like "feedback" or "control" to passive LC circuits is a bit unusual. You working on something really exotic?

Zack Lau KH6CP/1

Internet: zlau@arrl.org "Working" on 24 GHz SSB/CW gear  
Operating Interests: 10 GHz CW/SSB/FM  
US Mail: c/o ARRL Lab 80/40/20 CW  
225 Main Street Station capability: QRP, 1.8 MHz to 10 GHz  
Newington CT 06111 modes: CW/SSB/FM/packet  
amtor/baudot  
Phone (if you really have to): 203-666-1541

-----  
Date: 6 May 93 16:24:50 GMT  
From: ogicse!uwm.edu!zaphod.mps.ohio-state.edu!moe.ksu.ksu.edu!crcnis1.unl.edu!  
rlosee@network.UCSD.EDU  
Subject: Where Can I FTP SuperMorse From?  
To: info-hams@ucsd.edu

Subject line says most of it. I've heard it's a good program but I can't find a reference for it even on our Archie server. Can someone post an FTP address for it?

--  
\*-----\*  
Robert D. Losee BITNET: ucas402@unlvm  
University of Nebraska Internet: rlosee@unlinfo.unl.edu  
Lincoln NE 68588-0496 Phone: (402) 472-7663  
-----

Date: 6 May 93 01:28:38 GMT  
From: pacbell.com!amdahl!amdahl!ikluft@network.UCSD.EDU  
Subject: Why is .info stuff here?  
To: info-hams@ucsd.edu

myers@hpfco.FC.HP.COM (Bob Myers) writes:  
>Is there some reason that bulletins, orbital elements, etc., are still being  
>posted both here and in rec.radio.info?

Yes. rec.radio.info serves as a cross-posting point for informational articles across all radio topics (not just amateur radio.) They're also posted here in rec.radio.amateur.misc because those articles do apply to amateur radio.

That doesn't always seem intuitive but the big difference is that we're dealing with 2 different kinds of newsgroups. r.r.a.misc is for discussion and all the traditional unmoderated newsgroup stuff. rec.radio.info is for informational articles so that automated archives and new users looking for a quick info resource have a single place to go. rec.radio.info is patterned after news.answers, which works the same way, just on a significantly higher volume.

The only articles that I noticed which are only posted to rec.radio.info (besides the intro/welcome messages from the moderator) are the daily solar bulletins. I think they were driven away from r.r.a.misc by people who flamed them.

In general, if it applies to amateur radio, it will/should be posted in r.r.a.misc. If it's an informational posting about any kind of radio, it should be cross-posted to rec.radio.info.

>I thought that that group was created  
>specifically to relieve the clogging of the .misc groups; it certainly hasn't  
>done that, and now I simply see duplication.

That wasn't exactly the purpose. But Paul KD3FU already covered that topic.

This situation may change a little if the reorganization passes its upcoming vote. For example, the space-related bulletins would very likely migrate to rec.radio.amateur.space. The DX-related ones to rec.radio.amateur.dx... etc. So that will reduce the load on rec.radio.amateur.misc right there.

But that is all pending the outcome of the vote. The Call for Votes (CFV) for the reorganization is just about ready to be sent to the moderator of news.announce.newgroups. Depending on how many articles he gets at once, it may take 3-5 days or more to get posted. (It will be cross-posted here.) But it's coming soon.

73 de KD6EUI

--

Ian Klufft KD6EUI PP-ASEL Amdahl Corporation, Open Systems Development  
iklufft@uts.amdahl.com Santa Clara, CA  
[disclaimer: any opinions expressed are mine only... not those of my employer]

-----  
Date: Thu, 6 May 1993 15:42:26 GMT

From: swrinde!gatech!howland.reston.ans.net!zaphod.mps.ohio-state.edu!  
news.acns.nwu.edu!casbah.acns.nwu.edu!lapin@network.UCSD.EDU  
To: info-hams@ucsd.edu

References <C6B8sx.Cps@srigenprp.sr.hp.com>,  
<1993Apr30.213111.8909@serval.net.wsu.edu>, <C6KvE4.A4r@wang.com>p  
Subject : Re: Sueing Jammers (Was: Re: "Busting" Jammers)

In article <C6KvE4.A4r@wang.com> dbushong@wang.com (Dave Bushong) writes:

>Life, liberty, and the pursuit of happiness. If you are denied the third  
>one (or any, for that matter), are your civil rights being violated?

>

>Dave

>--

>Dave Bushong, Wang Laboratories, Inc. Amateur Radio Callsign KZ10

Look in the Constitution: "Life, liberty, and the pursuit of \_property\_."  
The revolutionaries gave up happiness for property once they were rid of  
the British and thought about the implications of what they had said.

Greg KD9AZ  
glapin@nwu.edu

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Date: Thu, 6 May 1993 03:32:24 EST  
From: anomaly.sbs.com!kd1nr!news@uunet.uu.net  
To: info-hams@ucsd.edu

References <930503.162837.6v1.rusnews.w165w@garlic.sbs.com>,  
<1993May4.214110.9163@news.nd.edu>, <1993May05.233725.18912@anomaly.sbs.com>ew  
Subject : Re: no-code defense

kd1hz@anomaly.sbs.com (Rev. Michael P. Deignan) writes:

> rnimtzt@hilbert.helios.nd.edu (richard nimtz) writes:

>

>> I'm N9??? (the license is in the mail) and for no-code.

>

> Ever notice how all the no-code scumbags are for the no-code license?

Yup! Hey, maybe we should get Andy Rooney on 60 Minutes to do one of his  
"Did you ever wonder why?" segments about the no-code issue and how the  
ARRL stabbed every amateur in the back.

This from someone who's seriously considering dropping his ARRL  
membership come renewal time. But then again, from what I've been

hearing, the only reason most people are ARRL members is because QST is part of the deal. Heh.... yeah, mostly ads too.

Tony

```
-----  
Tony Pelliccio kd1nr/ae      "Usenet is like a herd of performing elephants  
*!***!***!***!***!***!*** with diarrhea -- massive, difficult to  
system@garlic.sbs.com      redirect, awe-inspiring, entertaining, and a  
----- source of mind-boggling amounts of excrement  
when you least expect it."  --spaf (1992)
```

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-----  
Date: Wed, 5 May 1993 23:46:51 GMT  
From: dog.ee.lbl.gov!overload.lbl.gov!agate!howland.reston.ans.net!noc.near.net!  
nic.umass.edu!umassd.edu!ulowell!das.wang.com!wang!dbushong@network.UCSD.EDU  
To: info-hams@ucsd.edu
```

References <1993Apr30.020548.6140@anomaly.sbs.com>,  
<C6B8sx.Cps@srigenprp.sr.hp.com>, <1993Apr30.213111.8909@serval.net.wsu.edu>u  
Subject : Re: Sueing Jammers (Was: Re: "Busting" Jammers)

i7994779@wsuaix.csc.wsu.edu (Patrick D. Walters;S10000) writes:

>In article <C6B8sx.Cps@srigenprp.sr.hp.com> alanb@sr.hp.com (Alan Bloom) writes:  
>>Rev. Michael P. Deignan (kd1hz@anomaly.sbs.com) wrote:

>>

>>: For instance, what would it take to sue someone who you can "prove" was  
>>: jamming the repeater? What "evidence" would be necessary to "prove" your  
>>: case in a civil court (since it is a preponderance of evidence and not  
>>: beyond-a-reasonable-doubt)?

>>

>>I think the problem is that even if you prove that he was causing  
>>malicious interference, you would collect little or no money. To be  
>>awarded a judgement, you have to show a financial injury. Not being  
>>able to talk on your favorite repeater wouldn't likely get you much  
>>of an award.

>>

>>AL N1AL "Not a lawyer"

>I think that you would be able to sue based n the fact that the jammer was  
>interfering (sp?) with the duties of that repeater. You can say members of  
>the repeater club pay X amount to use the atupatch, etc and the jammer was  
>keeping them from using that service that they paid for. It a sense it was  
>stealing! I am stretching this a bit since the rest of the repeater functions  
>are free, but it can't hurt to try. Find a local lawyer who is a HAM and

>see what they have to say.

Life, liberty, and the pursuit of happiness. If you are denied the third one (or any, for that matter), are your civil rights being violated?

Dave

--

Dave Bushong, Wang Laboratories, Inc.    Amateur Radio Callsign KZ10  
Project Leader, Recognition products    kz1o@n0ary.#noca.ca.na  
Internet: dbushong@wang.com

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Date: Thu, 6 May 1993 16:30:04 GMT  
From: netcomsv!attain!icd.teradyne.com!news@decwrl.dec.com  
To: info-hams@ucsd.edu

References <1rjma3\$9qg@network.ucsd.edu>, <C6Fp4o.F2L@news.Hawaii.Edu>, <718@zds-ux.UUCP>v

Subject : Re: no-code defense

In article <718@zds-ux.UUCP> bjstaff@zds-ux.UUCP (Brad Staff) writes:

-> So, ladies and gentlemen, why don't we take an informal poll here on  
-> the net: give your callsign and state whether you support the no-code  
-> license or feel it was a bad idea. I'll start:

->

-> I'm NH6IL and I'm against the no-code license.

-

-I'm AA8IF and I'm in favor of the no-code license.

I'm N1IST and I'm in favor of the no-code license.

If it wouldn't have been for the no-code license, I probably would not be a ham now. Once I got my no-code tech, got on the air, and found out what ham radio was all about, I did sit down and learned the core (I'm an extra now), but I still am not a big CW user. Most of our new members of the Boston ARC got their start as no-coders, and they are doing fine. Certainly no problems doing emergency communications at the Walk for Hunger last week.

Let's put this debate to rest once and for all. The no-code license is here, and if you look at the numbers, most new hams are entering the hobby that way. (And for all you worriers out there, many of them go ahead and learn code later on)

73,  
/mike

(Hope to contact you during the Massachusetts QSO party this weekend)

--

\\ / Michael L. Ardai N1IST Teradyne ATG Boston

-----  
/ | \ ardai@maven.dnet.teradyne.com

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End of Info-Hams Digest V93 #548

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